AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to FIG. 1. These sheets replace the original sheet including FIG. 1.

Attachment: Replacement Sheet

REMARKS

Claims 1-8 were presented for examination and were pending in this application. In the latest Office Action, claims 1-8 were rejected. With this amendment, claim 1 is amended, and new claims 9-10 are added. On the basis of the following remarks, consideration of this application and allowance of all pending claims are requested.

Claim 1 rejected under 37 U.S.C. § 112 as indefinite because it recited that a "first card" generated more heat than the "first card." The examiner correctly deduced that this was a typographical error — that the second instance of "first card" should have read "second card," which is how the claim was interpreted for examination. Applicant has amended claim 1 to correct this typographical error.

In addition, claim 1 was amended to recite that the first computer card "is one that" generates greater heat during operation than the second computer card. The amendment is made solely to make explicit that this is a structural limitation and that the step of generating heat is not required to infringe the claim; the amendment is not intended to change the scope of the claim in any way.

Claim 1 recites a motherboard assembly that includes a motherboard, a socket for receiving a central processing unit mounted on the motherboard, and first and second slots for receiving first and second computer cards, respectively. Claim 1 further recites that "the second slot is positioned between the central processing unit and the first slot, and the first computer card generates greater heat during operation than the second computer card." Through this configuration, as the specification explains, a card installed in the second slot may shield a card in the first slot from the CPU. Such a configuration may reduce the risk of heat damage and/or

EMI interference between the CPU and the first card in the first slot. Claims 2-8 depend from claim 1 and thus include all of these limitations.

Claim 1-8 were rejected based on the prior art FIG. 1 of the present specification in view of U.S. Patent 6,118,670 to Radford et al. Applicant respectfully traverses this rejection.

In making the rejection, the examiner cited the motherboard layout of FIG. 1, in which a slot for a higher heat-generating card is positioned between the CPU and a slot for a lower heat-generating card. The examiner noted, however, that FIG. 1 and its accompanying description do not disclose the claimed subject matter, which actually has the opposite configuration of the slots. Specifically, claim 1 recites a layout in which the slot for the lower heat-generating card is between the CPU and the slot for the higher heat-generating card. Accordingly, the examiner proposed modifying FIG. 1 by switching the higher and lower heat-generating cards so that the higher heat-generating card is on the outside. As support for this modification, the examiner cited Radford and suggested that the motivation would have been to "create[] a larger distance between the two hottest components."

This rejection is improper because Radford does not discuss the placement of components based on how much heat they produce. Radford just makes the unremarkable observation that placing components farther apart helps to dissipate the heat generated by the components. The portion of Radford cited in the Office Action states:

> On the one hand, increased operating speeds mean higher heat generation per component, which is a factor that militates for placing components at a larger distance from one another in order to ease the problem of heat dissipation. But on the hand, higher operating speeds also usually result in a speed to place components closer together in order to shorten the lengths of the traces that carry high-speed signals between them.

(Radford, col. 1, lines 19-26.) In this passage, Radford is merely discussing two countervailing design considerations for designers of printed circuit designs to balance: Placing components

closer together is good because it shortens the traces that carry high-speed signals, but placing the components farther apart is good because it helps dissipate the heat they generate.

Importantly, Radford does not distinguish between components that generate more or less heat, nor does Radford discuss rearranging components based on how much heat they generate. Radford just recognizes that heat-generating components will dissipate heat more effectively if they are farther away from each other. If one were to apply this suggestion in Radford to the cited FIG. 1 (assuming such a combination were even proper), the result would be merely to space out the components on the motherboard of FIG. 1. But there would have been no motivation to rearrange the first and second slots of FIG. 1 based on the cited passage of Radford, which is what would be needed to achieve the claimed invention.

Accordingly, the addition of Radford to the motherboard shown in FIG. 1 cannot render the claims obvious.

New claims 9 and 10, which depend from claim 1, have also been added. These claims are directed to an embodiment described, for example, in paragraph 8 of the specification, in which the first slot is a designed to receive a larger computer card than the second slot and is positioned close to an edge of the motherboard. This claimed configuration provides for improved access to the components within a computer, since it avoids obstructions among the cards in the computer. Specifically, it avoids having a smaller card located between a larger card and the computer chassis, where it would be difficult to access the smaller card. The art of record does not disclose or suggest this feature, nor does it even address the same problem.

Lastly, FIG. 1 has been amended to correct a typographical error. Specifically, the label for element 1 has been amended from "APG slot" to "AGP slot," which corresponds to the

accompanying description in the specification as well as to the corresponding element in FIG. 2. No new matter has been added.

Based on the foregoing, the application is in condition for allowance of all claims, and a Notice of Allowance is respectfully requested. If the examiner believes for any reason direct contact would help advance the prosecution of this case to allowance, the examiner is encouraged to telephone the undersigned at the number given below.

Respectfully submitted,
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